What is claimed is:

1. A method for providing wireless data communication between an access point connected to a communication network and a remote mobile unit, out of range of direct wireless communication with said access point, wherein said method comprises:

a) establishing a path between said remote mobile unit and said access point, wherein said path includes one or more intermediate mobile units, wherein a first intermediate mobile among said intermediate mobile units communicates directly by radio with said access point, and wherein pairs of mobile units adjacent one another along said path communicated directly with one another by radio; and

b) sending data along said path between said remote mobile unit said access point, wherein each said intermediate mobile unit in said path receives data transmitted by wireless along said path in a first direction, and wherein each said intermediate mobile unit in said path then transmits said data to continue in said first direction along said path.

2. The method of claim 1, wherein step a) is preceded by determining that said remote mobile unit is out of range of direct wireless communication with said access point.

3. The method of claim 1, wherein step a) comprises:

c) generating remote access request information, including an address identifying said remote mobile unit, within said remote mobile unit;

d) transmitting said remote access request information by radio from said remote mobile unit;

e) receiving said remote access request information by radio in each intermediate mobile unit in said path, adding an address identifying said intermediate mobile unit as a part of said path to said remote access request

information, and then retransmitting said remote access request information by radio from said intermediate mobile unit;

f) receiving said remote access request information by radio in said access point;

g) generating remote access response information, including an address identifying said access point, within said access point;

h) transmitting said remote access response information by radio from said access point;

i) receiving said remote access response information by radio in each intermediate mobile unit in said path as said remote access information is transmitted from said access point to said remote mobile unit, wherein each intermediate mobile unit is identified as being within said path by said address identifying said intermediate mobile unit, and then retransmitting said remote access response information by radio from said intermediate mobile unit;

j) receiving said remote access response information by radio in said remote mobile unit; and

k) storing said addresses identifying each said intermediate mobile unit in said path and said access point.

4. The method of claim 3, wherein, within step e),

said step of retransmitting said remote access request information is preceded by determining whether said intermediate mobile unit is within range to transmit data directly by radio to said access point and to receive data directly by radio from said access point, and

said step of retransmitting said remote access request information directs said remote access request information to said access point if said intermediate mobile unit is within range to transmit data directly by radio to said access point and to receive data directly by radio from said access point.

5. The method of claim 4, wherein, within step e),

said step of determining whether said intermediate mobile unit is within range to transmit data directly by radio to said access point and to receive data directly by radio from said access point is preceded by determining that said intermediate mobile unit is not associated with said access point, and

said step of retransmitting said remote access request information directs said remote access request information to said access point if said intermediate mobile unit is determined to be associated with said access point.

6. The method of claim 2, wherein

said remote mobile unit receives a plurality of said remote access response information, including a plurality of paths described by addresses identifying said access point and said intermediate mobile units, and

a path first received by said remote mobile unit is stored within said remote mobile unit to describe said path for sending data in step b).

7. The method of claim 6, wherein one or more paths received by said remote mobile unit after said path first received are stored within said remote mobile unit to describe said path for sending data in step b) after a failure to receive data transmitted along said path first received.

8. The method of claim 2, wherein step b) includes:

generating data information within said remote mobile unit;

adding said addresses, identifying each said intermediate mobile unit in said path and said access point, to said data information generated within said remote mobile unit;

transmitting said data information generated within said remote mobile unit by radio from said remote mobile unit;

receiving said data information generated within said remote mobile unit by radio in each intermediate mobile unit in said path as said data information

generated within said remote mobile unit is transmitted from said remote mobile unit to said access point, wherein each said intermediate mobile unit is identified as being within said path by said address identifying said intermediate mobile unit, and then retransmitting said data information generated within said remote mobile unit by radio;

receiving said data information generated within said remote mobile unit by radio in said access point;

deleting said addresses, identifying each said intermediate mobile unit in said path and said access point, from said data information generated within said remote mobile unit; and

sending said data information generated within said remote mobile unit along said communication network from said access point.

9. The method of claim 8, wherein step b) additionally includes:

receiving data information from said communication network, addressed to said remote mobile unit, at said access point;

adding said addresses, identifying each said intermediate mobile unit in said path and said access point, to said data information received from said communication network;

transmitting said data information received from said communication network by radio from said access point;

receiving said data information received from said communication network by radio in each intermediate mobile unit in said path as said data information received from said communication network is transmitted from said access point to said remote mobile unit, wherein each said intermediate mobile unit is identified as being within said path by said address identifying said intermediate mobile unit, and then retransmitting said data information received from said communication network by radio; and

receiving said data information received from said communication network by radio in said remote mobile unit.

10. A system for providing a wireless connection to a communication network at a remote location, wherein said system comprises:

an access point connected to said communication network, including an access point radio device transmitting and receiving wireless communications, wherein said access point receives, through said access point radio device, remote request frames including addresses identifying a mobile unit generating said remote access request frames and a path extending between said mobile unit generating said remote access request frames and said access point, wherein said access point generates, in response to receiving said remote request frames, remote access response frames including said addresses identifying said mobile unit generating said remote access request frames and a path extending between said mobile unit generating said remote access request frames and said access point, wherein said access point transmits said remote access response frames through said access point wireless device, wherein said access point, after transmitting said remote access response frames, receives, through said access point radio device, data frames transmitted along said path from said mobile unit generating said remote access request frames and transmits data from said data frames along said communications network;

a remote mobile unit at said remote location, including a first radio device transmitting and receiving wireless communications, wherein said first radio device is out of range to transmit wireless communications directly to said access point, wherein said remote mobile unit generates said remote access request frames and transmits said remote access request frames through said first radio device, wherein said remote mobile unit receives, through said first radio device, remote access response frames including addresses identifying said remote mobile unit as said mobile unit generating said remote access request frames and a path extending between said remote mobile unit and said access point, and wherein, in response to receiving said remote access response frames, said remote mobile unit generates data frames including said addresses identifying

said remote mobile unit and said path extending between said remote mobile unit and said access point, and transmits said data frames through said first radio device; and

a first intermediate mobile unit at a first intermediate location, including a second radio device transmitting and receiving wireless communications, wherein said second radio device is within range to transmit wireless communications directly to said access point, wherein said first intermediate mobile unit receives said remote access request frames and adds an address of said first intermediate mobile unit to a path in said remote access request frames, wherein said first intermediate mobile unit then transmits said remote access request frames through said second radio device to said access point, and wherein, after transmitting said remote access request frames to said access point, said first intermediate mobile unit receives remote access response frames and data frames through said second radio device transmitted along said path between said access point and said remote mobile unit and retransmits said remote access response frames and data frames through said second radio device to continue along said path between said access point and said remote mobile unit.

11. The system of claim 10, additionally comprising a second intermediate mobile unit at a second intermediate location, including a third radio device transmitting and receiving wireless communications, wherein said third radio device is out of range to transmit wireless communications directly to said access point, wherein said second intermediate mobile unit receives said remote access request frames and adds an address of said second intermediate mobile unit to a path in said remote access request frames, wherein said second intermediate mobile unit then transmits said remote access request frames through said third radio device, and wherein, after transmitting said remote access request frames, said second intermediate mobile unit receives remote access response frames and data frames through said third radio device transmitted along said path between said access point and said remote mobile unit and retransmits said

remote access response frames and data frames through said third radio device to continue along said path between said access point and said remote mobile unit.

12. The system of claim 10, wherein said access point, after transmitting said remote access response frames, receives data frames from said communications network addressed to said remote mobile unit, adds each address describing said path to said data frames received from said communications network, and transmits said data frames received from said communications network through said access point radio device along said path.

13. A mobile computing system comprising:

a radio device;

information storage; and

a microprocessor programmed to cause said mobile computing system to perform steps of:

a) determining whether said radio device is within range to transmit data to an access point and to receive data from said access point;

b) in response to determining in step a) that said radio device is within range to transmit data to said access point and to receive data from said access point, requesting association with said access point;

c) in response to determining in step a) that said radio device is out of range to transmit data to said access point and to receive data from said access point, transmitting remote access request frames through said radio device;

d) in response to receiving first remote access response frames through said radio device, storing in said information storage, from said first remote access response frames, addresses of an access point and of intermediate computing systems providing a first path between said mobile computing system and said access point;

e) adding said addresses of said access point and of said intermediate computing systems to data frames to be transmitted; and

f) transmitting said data frames through said radio device.

14. The mobile computing system of claim 13, wherein said microprocessor is programmed to cause said mobile computing system to perform additional steps of:

after step d), in response to receiving additional remote access response frames, storing addresses of one or more access points and of intermediate computing systems, providing a plurality of additional paths between said mobile computing system and said one or more access points, in a data structure within said information storage;

examining received data frames to determine if a data transmission problem exists; and

in response to determining that a data transmission problem exists, adding addresses forming a path in said plurality of additional paths stored in said data structure to said data frames to be transmitted.

15. The mobile computing system of claim 14, wherein said microprocessor is programmed to cause said mobile computing system to perform an additional step of, in response to determining that a data transmission problem exists, and additionally in response to determining that all paths stored in said data structure have been used, repeating steps a) through f).

16. The mobile computing system of claim 14, wherein a data transmission problem is determined to exist when a termination tag is detected as part of said received data frames.

17. The mobile computing system of claim 13, wherein step a) includes:

transmitting probe frames through said radio device, and

determining that said radio device is within range to transmit data to an access point and to receive data from said access point if response frames, transmitted from said access point in response to said probe frames are received through said radio device within a predetermined time.

18. The mobile computing system of claim 13, wherein step a) includes receiving beacon frames transmitted from an access point within a predetermined time.

19. A mobile computing system comprising:

a radio device;

information storage; and

a microprocessor programmed to cause said mobile computing system to perform steps of:

a) receiving, through said radio device, remote access request frames transmitted from a remote mobile unit;

b) following step a), determining if communication bandwidth is available within said mobile computing system;

c) in response to determining that said communication bandwidth is available within said mobile computing system, retransmitting said remote access request frames;

d) receiving, through said radio device, data frames with an address of said mobile computing system in a path extending between said remote mobile unit and an access point; and

e) transmitting said data frames received in step d) to a next computing system along said path.

20. The mobile computing system of claim 19, additionally comprising a display device, wherein

said microprocessor is additionally programmed to present a graphical user interface causing controls to be presented on said display device and accepting user inputs to set a first value, corresponding to a number of paths between one or more remote mobile systems and one or more access points to be accepted when a communications program is running within said mobile computing system, and a second value, corresponding to a number of said paths to be accepted when a communications program is not running within said mobile computing system, and to store said first and second values in said information storage, and

step b) includes comparing a present number of paths accepted by said mobile computing system with said first value stored in said information storage when a communications program is running within said mobile computing system and with said second value stored in said information storage when a communications program is not running within said mobile computing system.

21. The mobile computing system of claim 19, wherein said microprocessor is additionally programmed to cause said mobile computing system to perform, following step d), steps of:

f) determining if said data frames indicate that a present number of paths being used through said mobile computing system between one or more remote mobile systems and one or more access points has changed; and

g) changing a path number variable stored in said information storage in response to an indication in step f) that said number of paths has changed.

22. The mobile computing system of claim 21, wherein step f) includes:

h) determining if said data frames are initially sent from a remote mobile system;

i) in response to a determination that said data frames are initially sent from a remote mobile system, determining whether an address identifying said remote mobile system is stored in said information storage;

j) in response to a determination that said address identifying said remote mobile system is not stored in said information storage, storing said address identifying said remote mobile system in said information storage and adding one to said path number variable.

23. The mobile computing system of claim 22, wherein step f) additionally includes:

k) in response to a determination that said data frames are initially sent from a remote mobile system, determining whether a termination tag is present in said data frames; and

l) in response to a determination that said termination tag is present in said data frames, deleting an address identifying said remote mobile system from said information storage and decreasing said path number variable by one.

24. The mobile computing system of claim 19, wherein said microprocessor is additionally programmed to cause said mobile computing system to perform, between steps d) and e), steps of:

determining that said data frames are initially sent by an access point;

determining if sufficient bandwidth is available within said mobile computing system;

in response to a determination that sufficient bandwidth is not available, adding a termination tag to said data frames.

25. The mobile computing system of claim 19, wherein step c) includes:

determining whether said mobile computing system is associated with an access point;

determining whether said radio device of said mobile computing system is within range to transmit data to said access point and to receive data from said access point;

in response to a determination that said mobile computing system is associated with an access point, and additionally in response to a determination that said radio device is within range, transmitting said remote access request frames to said access point; and

in response to determinations that said mobile computing system is not associated with an access point and that said radio device of said mobile computing system is not within range transmitting said remote access request frames without a destination address.

26. An access point comprising:

a radio device;

a connection to a communications network;

information storage; and

a microprocessor programmed to cause said access point to perform steps of:

a) receiving remote access request frames through said radio device;

b) in response to receiving said remote access request frames, determining whether to grant remote association to a remote computing system initially transmitting said remote access request frames;

c) in response to determining to grant remote association to said remote computing system, storing addresses identifying one or more intermediate mobile units received with said remote access request frames in said information storage, generating remote response frames, adding said addresses to said remote response frames and transmitting said remote access response frames through said radio device.

27. The access point of claim 26, wherein said microprocessor is additionally programmed to cause said access point to perform the following steps:

d) receiving first data frames from said communications network addressed to said remote computing system;

e) adding said addresses to said first data frames; and

f) transmitting said first data frames through said radio device.

28. The access point of claim 27, wherein said microprocessor is additionally programmed to cause said access point to perform the following steps:

g) receiving second data frames through said radio device originally sent by said remote computing system;

h) deleting said address from said second data frames; and

i) sending said second data frames along said communications network.

29. A computer usable medium storing computer readable instructions, wherein said computer readable instructions loaded into a mobile computing system, including a radio device, information storage, and a microprocessor, to execute a program cause said mobile computing system to perform steps of:

a) determining whether said radio device is within range to transmit data to an access point and to receive data from said access point;

b) in response to determining in step a) that said radio device is within range to transmit data to said access point and to receive data from said access point, requesting association with said access point;

c) in response to determining in step a) that said radio device is out of range to transmit data to said access point and to receive data from said access point, transmitting remote access request frames through said radio device;

d) in response to receiving first remote access response frames through said radio device, storing in said information storage, from said first remote access response frames, addresses of an access point and of intermediate

computing systems providing a first path between said mobile computing system and said access point;

e) adding said addresses of said access point and of said intermediate computing systems to data frames to be transmitted; and

f) transmitting said data frames through said radio device.

30. The computer usable medium of claim 29, wherein said program additionally causes said mobile computing system to perform steps of:

after step d), in response to receiving additional remote access response frames, storing addresses of one or more access points and of intermediate computing systems, providing a plurality of additional paths between said mobile computing system and said one or more access points, in a data structure within said information storage;

examining received data frames to determine if a data transmission problem exists; and

in response to determining that a data transmission problem exists, adding addresses forming a path in said plurality of additional paths stored in said data structure to said data frames to be transmitted.

31. The computer usable medium of claim 30, wherein said program additionally causes said mobile computing system to perform a step of, in response to determining that a data transmission problem exists, and additionally in response to determining that all paths stored in said data structure have been used, repeating steps a) through f).

32. The computer usable medium of claim 30, wherein said program additionally causes a data transmission problem to be determined to exist when a termination tag is detected as part of said received data frames.

33. The computer usable medium of claim 29, wherein step a) includes:

transmitting probe frames through said radio device, and

determining that said radio device is within range to transmit data to an access point and to receive data from said access point if response frames, transmitted from said access point in response to said probe frames are received through said radio device within a predetermined time.

34. The computer usable medium of claim 29, wherein step a) includes receiving beacon frames transmitted from an access point within a predetermined time.

35. A computer usable medium storing computer readable instructions, wherein said computer readable instructions loaded into a mobile computing system, including a radio device, information storage, a display unit, and a microprocessor, to execute a program cause said mobile computing system to perform steps of:

a) receiving, through said radio device, remote access request frames transmitted from a remote mobile unit;

b) following step a), determining if communication bandwidth is available within said mobile computing system;

c) in response to determining that said communication bandwidth is available within said mobile computing system, retransmitting said remote access request frames;

d) receiving, through said radio device, data frames with an address of said mobile computing system in a path extending between said remote mobile unit and an access point; and

e) transmitting said data frames received in step d) to a next computing system along said path.

36. The computer usable medium of claim 35, wherein said program additionally causes said mobile computing system to present a graphical user

interface causing controls to be presented on said display device and accepting user inputs to set a first value, corresponding to a number of paths between one or more remote mobile systems and one or more access points to be accepted when a communications program is running within said mobile computing system, and a second value, corresponding to a number of said paths to be accepted when a communications program is not running within said mobile computing system, and to store said first and second values in said information storage, and

step b) includes comparing a present number of paths accepted by said mobile computing system with said first value stored in said information storage when a communications program is running within said mobile computing system and with said second value stored in said information storage when a communications program is not running within said mobile computing system.

37. The computer usable medium of claim 35, wherein said program additionally causes said mobile computing system to perform, following step d), steps of:

f) determining if said data frames indicate that a present number of paths being used through said mobile computing system between one or more remote mobile systems and one or more access points has changed; and

g) changing a path number variable stored in said information storage in response to an indication in step f) that said number of paths has changed.

38. The computer usable medium of claim 37, wherein step f) includes:

h) determining if said data frames are initially sent from a remote mobile system;

i) in response to a determination that said data frames are initially sent from a remote mobile system, determining whether an address identifying said remote mobile system is stored in said information storage;

j) in response to a determination that said address identifying said remote mobile system is not stored in said information storage, storing said address identifying said remote mobile system in said information storage and adding one to said path number variable.

39. The computer usable medium of claim 38, wherein step f) additionally includes:

k) in response to a determination that said data frames are initially sent from a remote mobile system, determining whether a termination tag is present in said data frames; and

l) in response to a determination that said termination tag is present in said data frames, deleting an address identifying said remote mobile system from said information storage and decreasing said path number variable by one.

40. The computer usable medium of claim 35, wherein said microprocessor is additionally programmed to cause said mobile computing system to perform, between steps d) and e), steps of:

determining that said data frames are initially sent by an access point;

determining if sufficient bandwidth is available within said mobile computing system;

in response to a determination that sufficient bandwidth is not available, adding a termination tag to said data frames.

41. The computer usable medium of claim 35, wherein step c) includes:

determining whether said mobile computing system is associated with an access point;

determining whether said radio device of said mobile computing system is within range to transmit data to said access point and to receive data from said access point;

in response to a determination that said mobile computing system is associated with an access point, and additionally in response to a determination that said radio device is within range, transmitting said remote access request frames to said access point; and

in response to determinations that said mobile computing system is not associated with an access point and that said radio device of said mobile computing system is not within range transmitting said remote access request frames without a destination address.

42. A computer usable medium storing computer readable instructions, wherein said computer readable instructions loaded into an access point, including a radio device, a connection to a communications network, information storage, and a microprocessor, to execute a program cause said access point to perform steps of:

a) receiving remote access request frames through said radio device;

b) in response to receiving said remote access request frames, determining whether to grant remote association to a remote computing system initially transmitting said remote access request frames;

c) in response to determining to grant remote association to said remote computing system, storing addresses identifying one or more intermediate mobile units received with said remote access request frames in said information storage, generating remote response frames, adding said addresses to said remote response frames and transmitting said remote access response frames through said radio device.

43. The computer usable medium of claim 42, wherein said program additionally causes said access point to perform the following steps:

d) receiving first data frames from said communications network addressed to said remote computing system;

e) adding said addresses to said first data frames; and

f) transmitting said first data frames through said radio device.

44. The computer usable medium of claim 43, wherein said program additionally causes said access point to perform the following steps:

g) receiving second data frames through said radio device originally sent by said remote computing system;

h) deleting said address from said second data frames; and

i) sending said second data frames along said communications network.

45. A computer data signal embodied in a carrier wave comprising computer readable instructions, wherein said computer readable instructions loaded into a mobile computing system, including a radio device, information storage, and a microprocessor, to execute a program cause said mobile computing system to perform steps of:

a) determining whether said radio device is within range to transmit data to an access point and to receive data from said access point;

b) in response to determining in step a) that said radio device is within range to transmit data to said access point and to receive data from said access point, requesting association with said access point;

c) in response to determining in step a) that said radio device is out of range to transmit data to said access point and to receive data from said access point, transmitting remote access request frames through said radio device;

d) in response to receiving first remote access response frames through said radio device, storing in said information storage, from said first remote access response frames, addresses of an access point and of intermediate computing systems providing a first path between said mobile computing system and said access point;

e) adding said addresses of said access point and of said intermediate computing systems to data frames to be transmitted; and

f) transmitting said data frames through said radio device.

46. The computer data signal of claim 45, wherein said program additionally causes said mobile computing system to perform steps of:

after step d), in response to receiving additional remote access response frames, storing addresses of one or more access points and of intermediate computing systems, providing a plurality of additional paths between said mobile computing system and said one or more access points, in a data structure within said information storage;

examining received data frames to determine if a data transmission problem exists; and

in response to determining that a data transmission problem exists, adding addresses forming a path in said plurality of additional paths stored in said data structure to said data frames to be transmitted.

47. The computer data signal of claim 46, wherein said program additionally causes said mobile computing system to perform a step of, in response to determining that a data transmission problem exists, and additionally in response to determining that all paths stored in said data structure have been used, repeating steps a) through f).

48. The computer data signal of claim 46, wherein said program additionally causes a data transmission problem to be determined to exist when a termination tag is detected as part of said received data frames.

49. The computer data signal of claim 45, wherein step a) includes:

transmitting probe frames through said radio device, and

determining that said radio device is within range to transmit data to an access point and to receive data from said access point if response frames, transmitted from said access point in response to said probe frames are received through said radio device within a predetermined time.

50. The computer data signal of claim 45, wherein step a) includes receiving beacon frames transmitted from an access point within a predetermined time.

51. A computer data signal embodied in a carrier wave comprising computer readable instructions, wherein said computer readable instructions loaded into a mobile computing system, including a radio device, information storage, a display unit, and a microprocessor, to execute a program cause said mobile computing system to perform steps of:

a) receiving, through said radio device, remote access request frames transmitted from a remote mobile unit;

b) following step a), determining if communication bandwidth is available within said mobile computing system;

c) in response to determining that said communication bandwidth is available within said mobile computing system, retransmitting said remote access request frames;

d) receiving, through said radio device, data frames with an address of said mobile computing system in a path extending between said remote mobile unit and an access point; and

e) transmitting said data frames received in step d) to a next computing system along said path.

52. The computer data signal of claim 51, wherein said program additionally causes said mobile computing system to present a graphical user interface causing controls to be presented on said display device and accepting user inputs to set a first value, corresponding to a number of paths between one or more remote mobile systems and one or more access points to be accepted when a communications program is running within said mobile computing system, and a second value, corresponding to a number of said paths to be accepted when a communications program is not running within said mobile

computing system, and to store said first and second values in said information storage, and

step b) includes comparing a present number of paths accepted by said mobile computing system with said first value stored in said information storage when a communications program is running within said mobile computing system and with said second value stored in said information storage when a communications program is not running within said mobile computing system.

53. The computer data signal of claim 51, wherein said program additionally causes said mobile computing system to perform, following step d), steps of:

f) determining if said data frames indicate that a present number of paths being used through said mobile computing system between one or more remote mobile systems and one or more access points has changed; and

g) changing a path number variable stored in said information storage in response to an indication in step f) that said number of paths has changed.

54. The computer data signal of claim 53, wherein step f) includes:

h) determining if said data frames are initially sent from a remote mobile system;

i) in response to a determination that said data frames are initially sent from a remote mobile system, determining whether an address identifying said remote mobile system is stored in said information storage;

j) in response to a determination that said address identifying said remote mobile system is not stored in said information storage, storing said address identifying said remote mobile system in said information storage and adding one to said path number variable.

55. The computer data signal of claim 54, wherein step f) additionally includes:

k) in response to a determination that said data frames are initially sent from a remote mobile system, determining whether a termination tag is present in said data frames; and

l) in response to a determination that said termination tag is present in said data frames, deleting an address identifying said remote mobile system from said information storage and decreasing said path number variable by one.

56. The computer data signal of claim 51, wherein said microprocessor is additionally programmed to cause said mobile computing system to perform, between steps d) and e), steps of:

determining that said data frames are initially sent by an access point;

determining if sufficient bandwidth is available within said mobile computing system;

in response to a determination that sufficient bandwidth is not available, adding a termination tag to said data frames.

57. The computer data signal of claim 51, wherein step c) includes:

determining whether said mobile computing system is associated with an access point;

determining whether said radio device of said mobile computing system is within range to transmit data to said access point and to receive data from said access point;

in response to a determination that said mobile computing system is associated with an access point, and additionally in response to a determination that said radio device is within range, transmitting said remote access request frames to said access point; and

in response to determinations that said mobile computing system is not associated with an access point and that said radio device of said mobile computing system is not within range transmitting said remote access request frames without a destination address.

58. A computer data signal embodied in a carrier wave comprising computer readable instructions, wherein said computer readable instructions loaded into an access point, including a radio device, a connection to a communications network, information storage, and a microprocessor, to execute a program cause said access point to perform steps of:

a) receiving remote access request frames through said radio device;

b) in response to receiving said remote access request frames, determining whether to grant remote association to a remote computing system initially transmitting said remote access request frames;

c) in response to determining to grant remote association to said remote computing system, storing addresses identifying one or more intermediate mobile units received with said remote access request frames in said information storage, generating remote response frames, adding said addresses to said remote response frames and transmitting said remote access response frames through said radio device.

59. The computer data signal of claim 58, wherein said program additionally causes said access point to perform the following steps:

d) receiving first data frames from said communications network addressed to said remote computing system;

e) adding said addresses to said first data frames; and

f) transmitting said first data frames through said radio device.

60. The computer data signal of claim 59, wherein said program additionally causes said access point to perform the following steps:

g) receiving second data frames through said radio device originally sent by said remote computing system;

h) deleting said address from said second data frames; and

i) sending said second data frames along said communications network.